Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NOTES ON THE PHOTOGRAPHY OF WILD BIRDS.

By J. B. PARKER, State Agricultural College, Manhattan.

THE task of securing photographs of our birds in their wild state has for the student of bird life a peculiar fascination that enables him to persevere in his efforts in spite of the many trials and difficulties with which he is continually beset. No work with which I have had any acquaintance requires more patience, perseverance and fortitude than that of bird photography. It is a pursuit that calls for and usually arouses great enthusiasm, but I have learned by experience that it requires more than a superabundance of enthusiasm to enable one to secure good photographs of the birds, and in this short article I shall try to set forth some of the things my experience has taught me.

First in order comes the matter of equipment. I began with an ordinary 4 x 5 outfit, such as may be secured from any dealer in cameras. I soon found out that the rectilinear lenses, with a maximum speed of *f* 8, supplied with such cameras, are too slow. Although most of my work was done with a lens of this kind, I found that, when working with the living, active birds, satisfactory results could be obtained only in bright sunlight between the hours of eight A. M. and four P. M., since it was impossible to use an exposure of greater length than one one-hundredth of a second. On cloudy or hazy days nothing in this line could be done, and even on bright days, if a cloud obscured the sun at the critical moment, I was forced to sit idle and look on while some of my best opportunities passed by. To my mind, therefore, a lens of high speed, one with a maximum speed of *f* 6.5 or *f* 6, is a necessity. If the lens is to be used only for this work, a rectilinear of the requisite speed will prove as serviceable as any, but if one lens is to be used for all kinds of scientific work an anastigmatic lens is to be preferred.

With a fast-working lens we should have a fast-working shutter. This requirement is best met by the focal-plane shutter, with which, however, I have had no experience. Next to this type stand the between-lens shutters of the diaphragm type. Good work can be done, however, with the kind of shutter commonly furnished with cameras, as my photographs show, yet when the camera is set close to the nest it is next to impossible to secure a good photograph if the bird is moving at the instant of exposure. This deficiency in the movement of the cheaper grade of between-lens shutters I have found both discouraging and expensive.

The size of the plate to be used is a matter for the operator to determine for himself. I consider a 4x5 the most satisfactory size, but with this plate I should use a lens listed to cover a larger plate; that is, I should use a lens having a focal length of 8 or 8½ inches instead of one of 6 or 6½ inches, the size usually supplied with 4x5 cameras. The advantage in this combination lies in this: (1) Photographs with images of the desired size can be secured with a lens of 8-inch focal length at a greater distance from the object than with one of 6-inch focal length, and thus the photographer may work at a greater distance from the birds; (2) this increased distance from the object made possible by the use of the larger lens increases the volume of light admitted to the 4x5 plate during the brief exposure rendered imperative by the nature of the subject; and (3) better definition is secured, since only the center of the field of the lens is utilized.

Another important consideration is the plate to be used. The fastest plate made is none too fast for this work. It is not so important that the photographer choose this brand of plates or that brand, as it is that he choose a good brand and then stick to it. It required an entire season to convince me of this necessity, but since the first year I have always used one brand of plates; not because I believe it is the best plate made, but because I have learned how to use this plate, have made myself familiar with its possibilities, and know just what I can do with it under given conditions of light. The photographer must know when he can and when he cannot secure a good negative with a given exposure, and this knowledge the amateur is not likely to acquire by using first one brand of plates and then another. Select a fast plate of known quality and stick to it; do not add to the difficulties by using plates with whose possibilities you are unfamiliar.

Selecting an equipment is a small matter—the real work begins when we set out to secure the photographs. The birds refuse to pose for us and as a rule build their nests in situations that seem to be selected with the express purpose of baffling the photographer. To secure photographs of nests and nesting sites, however, is not a task of great difficulty, since with these we may use time exposures. But when it comes to securing photographs of the birds themselves, especially when they are busy feeding and caring for their young in the nest, we have a task of quite another character.

In my efforts to obtain photographs of this kind I have made use of three different methods. In my first attempts I tried to use my camera as a hand camera, but the results were so discouraging that I consider my efforts worse than wasted. With a camera of the reflex type good work, I presume, can be done in this manner, but with the common type of camera the whole thing is mere chance and guesswork. A better plan is to place the camera in position, focus it upon some definite point and then, with one end of a long string attached to the shutter and all in readiness for an exposure, sit in concealment at the other end of the string and await your opportunity. Instead of a string some use a long rubber tube with bulb attached. In many cases where situations were favorable I found the use of the string a very satisfactory method. But it has two serious disadvantages: First, you are too far away from the nest to see what is going on and so have but little opportunity to study the home life of the birds, while at the same time you are never sure of what you are getting when you make an exposure, and, second, you disturb or alarm the birds whenever you approach the camera, as you must necessarily do, in order to prepare it for a subsequent exposure. When following this plan I frequently failed to get what I desired, because of the difficulty of releasing the shutter at exactly the right instant. If better may not be had this plan will do, but to Prof. F. H. Herrick, of Western Reserve University, belongs, I believe, the credit for having hit upon a plan that I consider the best yet devised.

This requires a tent in which the operator works concealed, and if the nest in its natural situation does not permit of the use of the tent, the nest is moved to a position where the tent can be used. In moving the nest we depend upon the attachment of the parent birds to their offspring to cause them to follow the nest, and in every case in which I found it necessary to move the nest the old birds followed it up promptly. The birds soon become accustomed to the tent and the new situation of the nest and go about their duties in their usual manner. In the list of birds whose nests I have moved are included the chipping sparrow, wood pewee, Acadian flycatcher, robin, summer warbler, redstart, cedar waxwing, kingbird and Cooper's hawk. The tent I used was made of green denim supported on a light framework consisting of a ridge-pole four feet six inches long, two upright pieces six feet six inches long, each shod with iron at the lower end, and crossed two feet from the upper end by a cross-bar four feet long which was attached at its middle point to the upright by a screw. This permitted the cross-bar to swing around parallel to the upright when the tent was folded. The tent proper, all in one piece with a series of openings in a vertical row a little to the left side of the middle of the front end, had four stout cords attached to it at the points where the ends of the cross-bars supported it. By means of these and four stout pegs the tent was securely guyed down to the ground. The four corners of the tent itself were fastened to the ground with long wire pins, and one of the rear corners was left open for ingress and egress. This worked well when pitched in the shade, but when in the open field in a July sun I found it necessary to cover the tent with a heavy woolen blanket to keep out the heat.

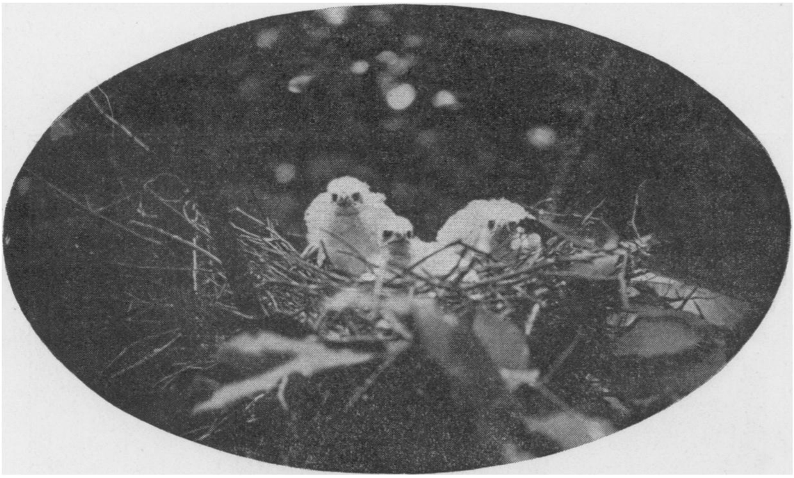
This plan has been denounced by some, who insist that the results obtained are unnatural—a misrepresentation of the facts in bird life. They maintain that the nest should never be moved from the place where it was constructed—that all photographs should represent natural conditions. Those who raise these objections do not hesitate, however, to remove leaves and twigs or push aside weeds and grass, or even to lop off branches, that they may obtain an unobstructed view of the nest in its "natural situation." Removal of the nest, with or without the nesting bough, is an interference with the natural conditions most certainly, but so also is a removal of twigs and branches or whatever else may obstruct a view of the nest. The whole thing is a question of degree of interference, and I have never found a nest yet with which I could work without interfering more or less with its natural surroundings. This much is true, however, that the home life of birds whose nest has been changed from its original position is as natural when they become accustomed to their new surroundings, which usually requires but a short time, as is the life of those birds whose nest has never been disturbed.

Whether the nest be moved or not it is necessary to have full sunlight upon it and the nestlings, and I have frequently found it necessary to devise an artificial shade of branches to protect the little birds from the withering heat of the sun. This shade was controlled by a string from within the tent and was pulled aside when the old birds came to the nest. It is never wise to meddle with a nest when the nestlings are quite young, either to expose the nest to the direct rays of the sun or to move it. The heat of the direct rays of a summer sun will soon prove fatal to very young birds, and the attachment of the parent birds may not be sufficiently strong at this stage to induce them to follow the nest. With half-fledged birds there is but little danger of the old birds abandoning them for any cause, and, if well fed, the young at this age will hardly succumb to the heat of the sun though subjected to it for several hours.

The advantage in using a tent lies not alone in the fact that better photographs can be secured by this method than by any other. Here the student of bird life, working only a few feet from the nest, all unobserved by the birds, can see and study all that goes on at the nest as the birds go about their household duties, feeding and caring for their young. He who has not had the opportunity of thus living with the birds has a pleasure still awaiting him that is well worth the seeking.

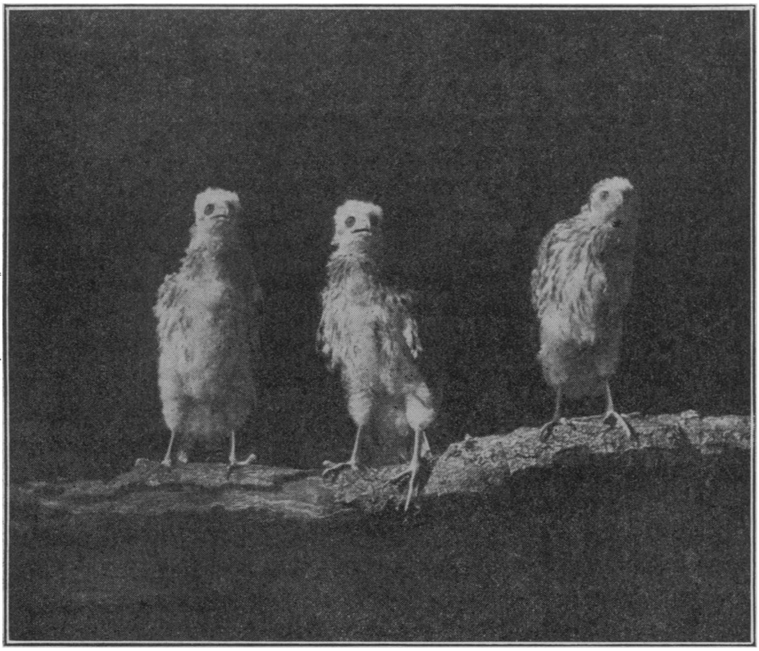
No. 1. Bringing down young Cooper's hawks.

Of all the birds that frequent the forests of Ohio none is more wary or more distrustful of man than is Cooper's hawk. On the 10th of July, 1904, I found the nest of a pair of these birds placed some sixty feet up in the forks of a large white-oak tree. The nest contained young, and to secure photographs of the birds and nest in its natural situation was utterly impossible, so I determined to bring the nest and young birds down to a position where I could make use of my tent. Accordingly, some fifty feet distant from the nesting-tree, I set up a rest made from a dead dogwood tree on which to place the nest, and on July 16 pitched my tent. On July 17, in the afternoon, my nephew, Charles Hammond, climbed to the nest as shown in photograph No. 1, lowered the three little birds in a basket, and after securely tying up the nest with stout cord succeeded in lowering it also. The nest was placed in the support prepared for it and the little birds were put back into the nest as shown in No. 2. The nest and tent were then not disturbed or visited until on the morning of the 19th, at which time I arrived at the nest and found everything in good condition. The old birds evidently had had no difficulty in finding their young and had not hesitated to feed and care for them in their new situation. The old birds were absent foraging when I arrived at the nest, so that I had ample time to get all in readiness for work long before the mother bird returned with food. When she did return she came without the least hesitation directly to the nest, bearing in her talons a meadow-lark from which she had previously stripped every vestige of feathers. Standing upon the edge of the nest, with her prey firmly held in one foot, she began at once to tear it to pieces with her beak, holding out to her little ones the smaller and more choice portions and devouring the coarser parts herself. The little hawks as they seized the food from the beak of their parent kept up a low happy musical chatter that to me seemed ill-suited to the gruesome meal they were making.



No. 2. Young hawks when nest was moved.

While this was going on I was busy inside the tent exposing plate after plate in an effort to profit by this long-sought opportunity. I had only a common rectilinear lens to work with, and I knew that snap-shots here were out of the question, owing to the shadows of the trees and the dark background beyond the nest. I was forced to use short time exposures—a hazardous business when your subjects are birds busy at a feast. Of some two dozen exposures made in the course of the three days during which I persisted in my efforts, only two proved successful. Convinced of the inefficiency of my lens I made no further attempt to secure photographs of the old birds. A lens with a working speed of *f* 6 would have enabled me to do what I found impossible to do with my common rectilinear lens. I contented myself with securing a final photograph of the young hawks just the evening before they abandoned the nest.



Young hawks ready to leave their nest.